

# ALASKA DEPARTMENT OF FISH AND GAME

## DIVISION OF COMMERCIAL FISHERIES

### NEWS RELEASE



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### 2012 Arctic-Yukon-Kuskokwim Herring Outlook

The 2012 Arctic-Yukon-Kuskokwim herring forecast and harvest allocations, given a maximum 20% exploitation rate of the projected biomass, are listed below for the northeastern Bering Sea herring stocks (Table 1).

Table 1. Projections of Pacific herring spawning biomass and harvest guideline for commercial fishing districts in the northeastern Bering Sea, Alaska, 2012.

District	Threshold	2011 Observed Biomass (tons)	2012 Projected Biomass (tons)	Exploitation Rate (%)	2012 Harvest Guideline (tons)
Security Cove	1,200	13,119 <sup>a</sup>	12,193	20	2,439
Goodnews Bay	1,200	36,810 <sup>a</sup>	33,008	20	6,602
Cape Avinof <sup>b</sup>	500	2,324 <sup>a</sup>	2,095	15	314
Nelson Island <sup>c</sup>	3,000	5,252 <sup>a</sup>	4,703	16	741
Nunivak Island	1,500	3,206 <sup>a</sup>	2,879	20	576
Cape Romanzof	1,500	5,343 <sup>a</sup>	4,794	20	959
Norton Sound	7,000	53,786	52,949	20	10,590
Port Clarence <sup>d</sup>	-	-	-	-	165
Totals		119,840	112,622	20	22,385

<sup>a</sup> 2010 model projected biomass and age composition was used because of no survey efforts in 2011.

<sup>b</sup> Nelson Island commercial harvest is 20% of projected biomass minus 200 tons for subsistence harvest.

<sup>c</sup> Cape Avinof commercial harvest is 15 % of projected biomass (5AAC27.895(a)).

<sup>d</sup> Guideline Harvest of Port Clarence was set to 165 in 1984.

This news release is to inform fishermen of projected herring biomass and guideline harvest levels, and the strategies employed if commercial fishing does occur. At this time, it is anticipated that some level of commercial herring fishing may occur in the AYK Region in 2012. Under the Bering Sea Herring Fishery Management Plan 5 AAC 27.060 commercial fishing will not open in a district unless the minimum threshold biomass is observed in that district.

Based on postseason escapement projections, the 2012 estimated spawning biomass for northeastern Bering Sea herring stocks (Security Cove to Norton Sound Districts) will be 112,622 tons. If the return is as anticipated the total allowable harvest could be 22,385 tons. A harvest of this magnitude in the AYK herring fishery would be one of the largest on record.

The 2012 AYK Region biomass projection was based on good aerial survey biomass estimates from Norton Sound in 2011 and biomass projections for 2011 were used for Security Cove, Goodnews Bay, Cape Avinof, Nunivak Island, Nelson Island, and Cape Romanzof. Herring samples collected from the test fishery at Goodnews Bay and Nelson Island in Kuskokwim Bay in 2010 and commercial and test fishery samples collected in Norton Sound through 2012 suggest that the forecasted population will be comprised primarily of herring ages 7–9 (76.1%) and ages 10 and older (16.9%).

The actual biomass observed in 2012 may fall above or below the preseason projections based on variability in the quality of aerial biomass assessments, the lack of recent aerial surveys, and annual fluctuation of survival or recruitment rates. Recruitment events typically occur every eight to ten years, as suggested by the dominant age 7 year class and high biomass estimates in Security Cove, Goodnews Bay, and Jacksmith Bay during 2010 and in Norton Sound during 2011.

The department will conduct aerial surveys as regularly as possible and monitor catch statistics inseason in Norton Sound. Guideline harvest levels may be adjusted according to inseason aerial assessments of herring biomass. If aerial surveys are not adequate because of poor weather and water clarity conditions, stock abundance will alternately be assessed using projected biomass, test fishery catches, and spawn deposition observations. In accordance with the AYK Region harvest strategy, any operational commercial fishery will not target newly recruited age classes (age 2 through age 5 herring). The duration of fishing periods and harvests would vary in each district depending on inseason biomass estimates, roe quality, spawning activity, weather conditions, fishing effort, and processor input.

#### ***Security Cove District***

The 2012 projected biomass for the Security Cove District is 12,193 tons and the minimum biomass threshold is 1,200 tons. A 20% exploitation rate would result in a harvest of 2,439 tons. The department will plan to verify herring biomass inseason to determine the biomass is large enough to support this level of harvest if fishing occurs. Herring ages 7–9 are expected to comprise 68% of the returning biomass (34%, 22%, and 12%, respectively). Age 10 and older herring are expected to comprise 21% of the biomass.

#### ***Goodnews Bay District***

The 2012 projected biomass for the Goodnews Bay District is 33,008 tons and the minimum biomass threshold is 1,200 tons. A 20% exploitation rate would result in a harvest of 6,602 tons. The department will plan to verify herring biomass inseason to determine the biomass is large enough to support this level of harvest if fishing occurs. Herring ages 7–8 (56%) and ages 9–10 (21%) are expected to dominate the fishery with age 11 and older (12%) and ages 5–6 (11%) expected to comprise the remaining biomass.

#### ***Cape Avinof District***

The 2012 projected biomass for the Cape Avinof District is 2,095 tons and the minimum biomass threshold is 500 tons. The exploitation rate will be no greater than 15% because of the limited database for this area and to ensure the subsistence fishing priority. Based on this exploitation rate,

potential harvest could be 314 tons. Herring ages 7–9 are expected to comprise 68% of the returning biomass. Age 10 and older herring are expected to comprise approximately 27% of the biomass.

#### ***Nelson Island District***

The 2012 projected biomass for the Nelson Island District is 4,703 tons and the minimum biomass threshold is 3,000 tons. A 20% exploitation rate would result in a commercial harvest of 741 tons after accounting for 200 tons in subsistence harvest uses. Herring ages 7–9 are expected to make up 69% of the returning population, contributing 21%, 26%, and 22% respectively. Herring age 10 and older are expected to comprise 26% of the biomass.

#### ***Nunivak Island District***

The 2012 projected biomass for the Nunivak Island District is 2,879 tons and a minimum biomass threshold of 1,500 tons. A 20% exploitation rate would result in a harvest of 576 tons. Ages 7–9 are expected to comprise 68% of the returning biomass, 20%, 26%, and 22% respectively. Herring age 10 and older are expected to comprise 27% of the biomass.

#### ***Cape Romanzof District***

The 2012 projected biomass for the Cape Romanzof District is expected to be 4,794 tons and the minimum biomass threshold is 1,500 tons. A 20% exploitation rate would result in a harvest of 959 tons. Since water turbidity in the Cape Romanzof area generally prevents aerial observations of herring, spawn deposition and test fishery and commercial catch rates will be used to determine the timing and duration of commercial fishing periods if fishing occurs. Herring ages 7–9 are expected to comprise 68% of the returning biomass, 20%, 26%, and 22%, respectively. Herring age 10 and older are expected to comprise 27% of the biomass.

#### ***Norton Sound District***

The 2012 projected biomass for the Norton Sound District is 52,949 tons and a minimum biomass threshold of 7,000 tons. A 20% exploitation rate would result in a guideline harvest of 10,590 tons. A maximum of 320 tons of herring are reserved to allow for the pound fishery to harvest a maximum of 90 tons of product (combined weight of herring roe and kelp). This leaves 10,270 tons for sac roe harvest. The beach seine harvest is allocated 10% of the sac roe projected harvest, or 1,027 tons. The 2012 herring fishery will be opened by emergency order and the fishery will close by emergency order when up to 20% of the available herring biomass has been harvested. Varied harvest rates may be applied to individual subdistricts based on biomass distribution, roe quality, weather, and sea ice conditions. Herring ages 7–9 are expected to comprise 85% of the returning biomass, 36%, 31%, and 18%, respectively. Herring age 10 and older are expected to comprise 11% of the biomass.

#### ***Port Clarence District***

Generally, the department does not project an outlook for the Port Clarence fishery because of the lack of data and the limited scope of the fishery. The guideline harvest of 165 tons established by the Alaska Board of Fisheries in 1981, and will be the allowable harvest in 2012. This harvest guideline is based on 2 years of research conducted by the department in both the Port Clarence and Kotzebue Districts. Even though this guideline has not appeared in the regulation book since 1984, it still represents the best estimate of harvestable biomass.